

To: TMT  
Subject: Flow Effects  
Date: July 17, 2006

The TMT subgroup met July 14, 2006 to quantify the effects of implementing the latest compromise proposal for operation of the Montana projects. Of particular interest were the details of the summer operation of the Canadian projects, per the 2006 Summer Storage Agreement between BPA and BCH. Of consideration, is whether or not releases of this water may be considered as an offset to any reduced flow impacts caused by the proposed compromise.

The operation as proposed at TMT consisted of the following project operations:

- Discharge a steady flow of 15 kcfs from Libby through August 31. No particular reservoir elevation is targeted.
- Discharge a steady flow of 3 kcfs from Hungry Horse through August 31. It is believed that this will result in a 10 ft. draft.

It is difficult to precisely quantify the effects of the MT flow reductions on McNary flows. This is largely due to uncertainty surrounding the forecasts of the required inflows and outflows needed to achieve the 20 ft. drafts.

Project	Expected average outflow to draft 20 ft by August 31	Change in outflow due to the new proposal
Libby	15 to 20 kcfs	0 to 5 kcfs
Hungry Horse	4 to 6 kcfs	1 to 3 kcfs
		Total: 1 to 8 kcfs

Thus, the potential flow reduction from implementing the proposed compromise operation would be to reduce McNary discharge by 1 to 8 kcfs per day once the operation begins.

Assuming this operation started the last week in July it would be in affect for approximately 5 weeks (35 day period). To express this range in total kcfs days results in a reduction in the range of 35 to 280 ksfd.

This year, due to the unusually high and uncontrollable runoff in late May and June, BPA entered into a unique storage agreement with BC Hydro, the 2006 Summer Storage Agreement. The agreement was to store additional water (above the 1 maf flow augmentation) as possible, in Canadian reservoirs for release during the summer period. Any water stored was to be shared equally by BPA and BCH although the release requirements were slightly different. This agreement was coordinated with the Fishery Agencies and Tribes in May of this year.

The total amount stored under this agreement was 673.6 ksfd. Thus each party has 336.8 ksfd of water for release. BPA must release all 336.8 ksfd between July 28 (and no later than July 31) and Sept 1. BCH must release half, 168.4 ksfd, between July 28 (no later than July 31) and Sept 1. BCH's remaining 168.4 ksfd must be released by Sept 22.

Thus the volume to be released between July 28 and Aug 31 is just over 1 maf.

Account holder	August release volume
BPA	336.8 ksfd
B.C. Hydro	168.4 ksfd
Total	505.2 ksfd

In some previous years, a Libby/Treaty swap has been implemented which was viewed as being flow neutral (replacing Libby water with a like amount of water from Treaty). BCH has expressly declined such an agreement for this year. Canada is already expecting low reservoir elevations by the end of summer. Therefore, they have declined any arrangements that would further drawdown their reservoirs such as a Libby/Treaty Swap.

To summarize, the Canadian storage agreement, unique to this year, will increase August volume by at least 505 ksfd compared to a Treaty only operation. The effect of implementing the proposed compromise operation at Libby and Hungry Horse would reduce discharge volume from the projects by 35 to 280 ksfd.